The invention claimed is:

1. An isolation plating medium for the identification of target bacteria in a sample containing a plurality of different bacteria comprising a mixture of (1) a carbohydrate capable of being a metabolic source for the target bacteria and supporting colonies of the target bacteria, (2) a pH indicator dye that changes the color of the plating medium to a first color different from the color of the medium responsive to a change in the pH of the medium, (3) a first substrate that does not react with the target bacteria and injects color into the medium of a second color responsive to the presence of an enzyme produced by a reaction between bacteria and said first substrate, the second color contrasting with the first color and the color of the medium, (4) a second substrate that does not react with the target bacteria and injects color into the medium of substantially the same color as the second color responsive to the presence of an enzyme produced by a reaction between bacteria and said second substrate, and (5) an ingredient for thickening the mixture in sufficient quantity to solidify the mixture.

2. An isolation plating medium for the identification of target bacteria in a sample containing a plurality of different bacteria comprising the medium of claim1 wherein the carbohydrate is one or more members of the group consisting of 2-Deoxy-D-Ribose, xylose, mannitol, dulcitol, sorbitol, L-rhamnose and D-arabitol.

3. An isolation plating medium for the identification of target bacteria in a sample containing a plurality of different bacteria comprising the medium of claim1 wherein the first substrate and the second substrate are members of the group consisting of 5-bromo-4-chloro-3-indoxyl-beta-D-galactopyraniside, 5-bromo-6-chloro-3-indoxyl-beta-D-galactopyraniside, 3-indoxyl-beta-D-galactopyraniside, 6-chloro-3-indoxyl-beta-

D-galactopyraniside, 4-nitrophenyl-beta-D-galactopyranoside, 2-nitrophenyl-beta-D-galactopyranoside, 5-iodo-3-indoxyl-beta-D-galactopyranoside, 4-methylumbelliferyl-beta-D-galactopyraniside and N-methylindoxyl-beta-D-galactopyranoside.

4. An isolation plating medium for the identification of *Salmonella* from a sample containing a plurality of different bacteria comprising the mixture of claim 3 in combination with an inhibitor of the group consisting of bile salt, bile salt #3, tellurite, sodium novobiocin and cefsulodin.

5. An isolation plating medium for the identification of target bacteria in a sample containing a plurality of different bacteria comprising the medium of claim1 in combination with a chromogenic substrate enhancer.

6. An isolation plating medium for the identification of target bacteria in a sample containing a plurality of different bacteria comprising the medium of claim 5 wherein the chromogenic substrate enhancer consisting of at least one member of the group isopropyl-beta-D-thiogalactopyranoside, 1-O-Methyl-beta-D-galactopyranoside, Ethyl-beta-D-thiogalactopyranoside, and Methyl--beta-D-thiogalactopyranoside.

7. An isolation plating medium for the identification of *Salmonella* from a sample containing a plurality of different bacteria comprising a mixture of (1) a carbohydrate capable of being a metabolic source for *Salmonella* and supporting colonies of *Salmonella* bacteria, (2) a pH indicator dye that changes the color of the plating medium to a first color different from and contrasting with the color of the medium responsive to a change in the pH of the medium, (3) a first chromogenic substrate that does not react with *Salmonella* and injects color into the medium of a second color responsive to the presence of beta-galactosidase, the second color contrasting with the first color and the color of the media, (4) a second chromogenic substrate that does not

react with *Salmonella* and injects color into the medium of approximately said second color responsive to the presence of beta-galactosidase, and (6) an ingredient for thickening the mixture in sufficient quantity to solidify the mixture.

8. An isolation plating medium for the identification of *Salmonella* from a sample containing a plurality of different bacteria comprising the mixture of claim 7 wherein the carbohydrate is 2-Deoxy-D-Ribose, and the first and second chromogenic substrates are 3-indoxyl-beta-D-galactopyraniside and 5-bromo-4-chloro-3-indoxyl-beta-D-galactopyraniside.

9. An isolation plating medium for the identification of *Salmonella* consisting essentially of a mixture of (1) carbohydrate that is metabolizable by *Salmonella* and is one or more members of the group consisting of 2-Deoxy-D-Ribose, xylose, mannitol, dulcitol, sorbitol, L-rhamnose and D-arabitol, (2) a pH indicator dye that changes the color of the plating medium to a first color responsive to a change in the pH of the medium, (3) a first chromogenic substrate that does not react with *Salmonella* bacteria and changes color to a second color responsive to the presence of galactosidase, (4) a second chromogenic substrate that does not react to *Salmonella* bacteria and changes color to approximately the same second color responsive to the presence of galactosidase, the second color contrasting with the first color and the first and second colors contrasting with the color of the medium, wherein the first substrate and the second substrate are members of the group consisting of 5-bromo-4-chloro-3-indoxyl-beta-D-galactopyraniside, 5-bromo-6-chloro-3-indoxyl-beta-D-galactopyraniside, 3-indoxyl-beta-D-galactopyraniside, 6-chloro-3-indoxyl-beta-D-galactopyraniside, 4-nitrophenyl-beta-D-galactopyranoside, 2-nitrophenyl-beta-D-galactopyranoside, 5-iodo-

3-indoxyl-beta-D-galactopyranoside, 4-methylumbelliferyl-beta-D-galactopyraniside and N-methylindoxyl-beta-D-galactopyranoside, and (6) an ingredient for thickening the mixture in sufficient quantity to solidify the mixture.

10. An isolation plating medium for the identification of *Salmonella* from a sample containing a plurality of different bacteria comprising the mixture of claim 8 wherein the ingredient for thickening the mixture is agar.